WHAT IS CLAIMED IS:

1. A lithographic support system, comprising:

a moveable support structure configured to support and move an object, said support structure comprising a clamp that clamps the substrate; and

a compliant structure configured to compensate for at least one of a tilt and displacement between said object and said clamp.

2. The lithographic support system of Claim 1, wherein said support structure comprises a robot arm having a support frame for holding said object.

3. The lithographic support system of Claim 2, wherein said robot arm comprises a rod coupled to said support frame, said rod comprising said compliant structure.

4. The lithographic support system of Claim 2, wherein said support frame comprises said compliant structure.

5. The lithographic support system of Claim 2, wherein said compliant structure is provided on said clamp.

6. The lithographic support system of Claim 2, wherein said support frame is in a plane defined by a x-axis, a y-axis, and a z-axis being perpendicular to said x-axis and said y-axis, said compliant structure providing a compliance in at least one of a first rotation (Rx) about said x-axis, a second rotation (Ry) about said y-axis, and a z-direction parallel to said z-axis.

7. The lithographic support system of Claim 3, wherein said compliant structure is arranged such that said support frame is allowed to rotate about a predetermined center of rotation.

8. The lithographic support system of Claim 1, wherein said object comprises a substrate (W).

9. The lithographic support system of Claim 1, wherein said support structure comprises a rod provided with said compliant structure.

10. The lithographic support system of Claim 1, wherein said compliant structure comprises a metal flexure.

11. A lithographic clamping structure, comprising:

a Johnson-Raybeck effect type clamp having an upper surface for clamping an object; and

an oxidized layer, provided on said upper surface of said Johnson-Raybeck effect type clamp to minimize heating effects transferred to said object.

12. The lithographic clamping structure of Claim 11, wherein said predetermined decaying AC-profile is an RF AC profile.

13. A lithographic support structure for holding and moving an objects, comprising:

at least one Johnson-Raybeck effect type clamp; and

a controller coupled to said Johnson-Raybeck effect type clamp and configured to provide a clamping and de-clamping voltage to said Johnson-Raybeck effect type clamp,

wherein said controller is arranged to generate said de-clamping voltage with a decaying AC-profile.

14. Method of cleaning a substrate holder in a lithographic apparatus including a clamp for clamping a substrate, the method comprising:

introducing a substrate in said lithographic projection apparatus;

clamping said substrate to said substrate holder such that said substrate contacts said substrate holder at a first location;

de-clamping said substrate from said substrate holder;

repeating said clamping and de-clamping a number of times such that said substrate contacts said substrate table repeatedly on at least one of said first location and at a location other than said first location.

15. A lithographic robot, comprising:

a robotic arm configured to hold and move an object; and

a compliant structure configured to compensate for at least one of a tilt and displacement between said object and said robotic arm.

16. The lithographic robot of Claim 15, wherein said robotic arm comprises a support frame for holding said object.

17. The lithographic robot of Claim 16, wherein said robot arm comprises a rod coupled to said support frame in which said rod comprises said compliant structure.

18. A lithographic apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support structure configured to support a patterning device that imparts a desired pattern onto said beam of radiation;

a substrate holder configured to hold a substrate;

a projection system configured to project said patterned beam onto a target portion of said substrate; and

a support system that holds and moves one of said substrate, said patterning device, and an object, in which said support system comprises:

a clamp; and

a compliant structure configured to compensate for at least one of a tilt and displacement between said substrate, said patterning device, or said object and said clamp.

19. A lithographic apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support structure configured to support a patterning device that imparts a desired pattern onto said beam of radiation;

a substrate holder configured to hold a substrate;

a projection system configured to project said patterned beam onto a target portion of said substrate; and

a Johnson Raybeck effect type clamp configured to clamp at least one of said substrate patterning device, said clamp having an upper surface and an oxidized layer, provided on said upper surface, to minimize heating effects transferred to said at least one of said substrate and said patterning device.

20. A lithographic apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support structure configured to support a patterning device that imparts a desired pattern onto said beam of radiation;

a substrate holder configured to hold a substrate;

a projection system configured to project said patterned beam onto a target portion of said substrate;

a robot configured to hold and move a substrate;

a clamp configured to clamp said substrate to said substrate holder such that said substrate contacts said substrate holder at a first location; and

a processor configured to instruct repeated clamping and de-clamping of said substrate by said clamp, such that said substrate contacts said substrate holder repeatedly at one of at least said first location and a location other than said first location.

21. A device manufacturing method, comprising:

providing a substrate via a support system, said supporting system configured to hold and move said substrate by clamping said substrate through a clamping structure and compensating for at least one of a tilt and displacement between said substrate and said clamping structure by employing a compliant structure;

providing a beam of radiation using a radiation system;

imparting a desired pattern onto said beam of radiation by a patterning device; and

projecting said patterned beam of radiation onto a target portion of said substrate via a projection system.

22. A device manufacturing method, comprising:

providing a substrate via a clamping structure, said clamping structure comprising a Johnson-Raybeck effect type clamp having an upper surface and an oxidized layer on said upper surface;

providing a beam of radiation using a radiation system;

imparting a desired pattern onto said beam of radiation by a patterning device; and

projecting said patterned beam of radiation onto a target portion of said substrate via a projection system.